



09/27/00

UTILITY PATENT APPLICATION TRANSMITTAL <small>Only for new nonprovisional applications under 37 CFR 1.53(b)</small>		Attorney Docket No. 196466US 2
First Inventor or Application Identifier IKUYO IKEDA		
Title	METHOD AND APPARATUS FOR EDITING AND PROCESSING A DOCUMENT USING A PRINTER DRIVER	

APPLICATION ELEMENTS <small>See MPEP chapter 600 concerning utility patent application contents</small>	ADDRESS TO: Assistant Commissioner for Patents Box Patent Application Washington, DC 20231
<p>1. <input checked="" type="checkbox"/> Fee Transmittal Form (e.g. PTO/SB/17) (Submit an original and a duplicate for fee processing)</p> <p>2. <input checked="" type="checkbox"/> Specification Total Pages 10</p> <p>3. <input checked="" type="checkbox"/> Formal Drawing(s) (35 U.S.C. 113) Total Sheets 2</p> <p>4. <input checked="" type="checkbox"/> Oath or Declaration Total Pages 3</p> <p>a. <input type="checkbox"/> Newly executed (original or copy)</p> <p>b. <input type="checkbox"/> Copy from a prior application (37 C.F.R. §1.63(d)) (for continuation/divisional with box 15 completed)</p> <p>i. <input type="checkbox"/> DELETION OF INVENTOR(S) Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §1.63(d)(2) and 1.33(b).</p> <p>5. <input type="checkbox"/> Incorporation By Reference (usable if box 4B is checked) The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4B, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.</p>	ACCOMPANYING APPLICATION PARTS <p>6. <input checked="" type="checkbox"/> Assignment Papers (cover sheet & document(s))</p> <p>7. <input type="checkbox"/> 37 C.F.R. §3.73(b) Statement (when there is an assignee) <input type="checkbox"/> Power of Attorney</p> <p>8. <input type="checkbox"/> English Translation Document (if applicable)</p> <p>9. <input type="checkbox"/> Information Disclosure Statement (IDS)/PTO-1449 <input type="checkbox"/> Copies of IDS Citations</p> <p>10. <input type="checkbox"/> Preliminary Amendment</p> <p>11. <input checked="" type="checkbox"/> White Advance Serial No. Postcard</p> <p>12. <input type="checkbox"/> Small Entity Statement(s) <input type="checkbox"/> Statement filed in prior application. Status still proper and desired.</p> <p>13. <input checked="" type="checkbox"/> Certified Copy of Priority Document(s)(1) (if foreign priority is claimed)</p> <p>14. <input checked="" type="checkbox"/> Other: Request for Priority</p>
<p>15. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below:</p> <p><input type="checkbox"/> Continuation <input type="checkbox"/> Divisional <input type="checkbox"/> Continuation-in-part (CIP) of prior application no.: Prior application information: Examiner: Group Art Unit:</p>	
<p>16. Amend the specification by inserting before the first line the sentence:</p> <p><input type="checkbox"/> This application is a <input type="checkbox"/> Continuation <input type="checkbox"/> Division <input type="checkbox"/> Continuation-in-part (CIP) of application Serial No. Filed on</p> <p><input type="checkbox"/> This application claims priority of provisional application Serial No. Filed</p>	
17. CORRESPONDENCE ADDRESS  22850 (703) 413-3000 FACSIMILE: (703) 413-2220	

Name:	Gregory J. Maier	Registration No.:	25,599
Signature:		Date:	9-27-00
Name:	Surinder Sachar	Registration No.:	34,423

Docket No. 196466US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) IKUYO IKEDA

SERIAL NO: New Application

FILING DATE: Herewith

FOR: METHOD AND APPARATUS FOR EDITING AND PROCESSING A DOCUMENT USING A PRINTER DRIVER

FEE TRANSMITTAL

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

FOR	NUMBER FILED	NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS	14 - 20 =	0	× \$18 =	\$0.00
INDEPENDENT CLAIMS	4 - 3 =	1	× \$78 =	\$78.00
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS (If applicable)			+ \$260 =	\$0.00
<input type="checkbox"/> LATE FILING OF DECLARATION			+ \$130 =	\$0.00
BASIC FEE				\$690.00
TOTAL OF ABOVE CALCULATIONS				\$768.00
<input type="checkbox"/> REDUCTION BY 50% FOR FILING BY SMALL ENTITY				\$0.00
<input type="checkbox"/> FILING IN NON-ENGLISH LANGUAGE			+ \$130 =	\$0.00
<input checked="" type="checkbox"/> RECORDATION OF ASSIGNMENT			+ \$40 =	\$40.00
TOTAL				\$808.00

- ☐ Please charge Deposit Account No. 15-0030 in the amount of _____ A duplicate copy of this sheet is enclosed.
- ☒ A check in the amount of **\$808.00** to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Date: 9-27-00

Tel. (703) 413-3000
Fax. (703) 413-2220



22850

Gregory J. Maier
Registration No. 25,599

Surinder Sachar
Registration No. 34,423

196466US2

TITLE OF THE INVENTION

METHOD AND APPARATUS FOR EDITING AND
PROCESSING A DOCUMENT USING A PRINTER DRIVER

CROSS REFERENCE TO RELATED DOCUMENTS

This document claims priority on and contains subject matter related to Japanese Patent Application No. 11-273185, filed on September 27, 1999, and the entire contents of which are hereby incorporated herein by reference.

BACKGROUND OF THE INVENTIONField of the Invention

The present invention relates to a printing image forming apparatus using a printer driver, and more particularly, to an image forming apparatus and image forming method in which a document image, instructed to be printed through the printer driver, can be printed after having been edited and processed in the printer driver instead of being edited and processed using an application. The present invention also relates to a recording medium in which a program to perform the image forming method is recorded, a print controlling apparatus with the program installed, and an image processing system including the print controlling apparatus and a printer.

Discussion of the Background

When an image to be printed is edited and processed with an image processing system, a document is edited and processed in an application because the editing can not be simply performed and processed by a printer driver. Therefore, especially when an image which has been edited and set is re-edited, it is hard to simply perform the editing operation.

SUMMARY OF THE INVENTION

The present invention has been made in view of the above-discussed and other problems and addresses the above-discussed and other problems.

The present invention advantageously provides a novel
5 printing image forming apparatus enabling an operator to simply edit, on a printer driver, a document on a computer and to print the document.

The present invention further advantageously provides a novel printing method, novel print control apparatus, and novel image processing system, which also enable an operator to simply edit, on a printer driver, a document on a computer and to print the document.

10 According to an embodiment of the present invention, the printing image forming apparatus includes a spacing device to form a space in an image of an original document to be printed for inserting a note into a document on a computer, an inserting device to insert text, images, graphics, and so forth into the space formed on the page as the note, and a display
15 indicating device to display the combined image on a screen of a display as a preview.

BRIEF DESCRIPTION OF THE DRAWINGS

A more complete appreciation of the present invention and many of the attendant advantages thereof will be readily obtained as the same becomes better understood by reference to the following detailed description when considered in connection with the
20 accompanying drawings, wherein:

Figs. 1A and 1B illustrate an image on an original page, and an image on a page obtained by an image forming apparatus according to the present invention, respectively; and

Fig. 2 is a flow chart for explaining a control method of the image forming apparatus

according to the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings, wherein like reference numerals designate identical or
5 corresponding parts throughout the several views, Figs. 1A and 1B explain an operation of a
printer driver according to an embodiment of the present invention.

Fig. 1A illustrates an image of an original document to be printed on an original page,
and Fig. 1B illustrates an image of the original document on a page in which a note is inserted
into the original image. That is, the present invention can print an original document
10 generated, for example, by a computer. Fig. 1A shows an image of an original page of the
original document. Fig. 1B shows a combined image in which the original image of Fig. 1A
is reduced and an area at the bottom of the image is left open so that a note can be inserted in
that space. Thus, Fig. 1B illustrates an example of a combined image in which the original
image is reduced and a comment as a note is inserted at a lower part of the original page.

15 A printing image forming apparatus using the printer driver according to the present
invention includes an inserting device to insert text, images, graphics, etc. as a note into an
original document produced on a computer when the original document is printed. The
printing image forming apparatus also includes a spacing device to form a space for inserting
the note by reducing an image on a page of the original document to be printed. The spacing
20 device can freely move the reduced image in directions of top, bottom, right, and left, i.e. up-
and-down and right-and-left, on the page when the note is inserted. The printing image
forming apparatus further includes a display indicating device to display a combined image
(as shown in Fig. 1B) on a screen of a display device as a preview.

Fig. 2 is a flow chart explaining a control method of the image forming apparatus having the above-described configuration. An application first is activated or started (step S10) to issue an order to print an original document. According to the issued order, a print dialog opens, and then a printer driver is activated to start to operate (step S11). A place where characters, images, or graphics are inserted as a note, e.g. a comment, is displayed on the print dialog of the printer driver (step S12).

A button for setting the note is prepared on a UI (User Interface) as a property of the printer driver so that an operator can select a designated operation of the button to move the note and comment (in the directions of top, bottom, right, and left). Whether the note setting button is selected is then determined (step S13). The operator sets a desired note and comment on the UI (step S14) after pressing the note setting button on the UI (i.e. after YES in step S13). The operator also sets a place where the note and comment is placed according to an indication prepared on the UI (step S15). Those settings are retained in the printer driver. Then, a printing region of an original document is reduced corresponding to a part where, for example, a note is inserted, and thereby, a place to insert the note is formed (as shown as the bottom portion in Fig. 1B). A combined image including the image of the original document and the note is displayed on the screen as a preview when a preview button prepared on the UI is pressed (step S16). During the operation, the objects can be simply transferred by a drag and drop operation so as to change or edit a layout on the preview (step S17). Thus, images can be easily edited. Accordingly, the apparatus displays the image that has been set on the page, and outputs the image.

A printing image forming apparatus according to the present invention may be realized by installing a recording medium, such as a CD-ROM, a flexible disk, and so forth in

which a computer readable program to perform the above-described control method is recorded, in a computer, such as a microcomputer, and then operate the program. Further, when the above-described program is installed in a computer, the computer can be operated as a print control apparatus.

5 Obviously, numerous additional modifications and variations of the present invention are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the present invention may be practiced otherwise than as specifically described herein.

WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS
PATENT OF THE UNITED STATES IS:

1. A printing image forming apparatus, comprising:

an inserting device configured to insert a note into an image of an original document
5 produced on a computer and to be printed;

a spacing device configured to form a space in an image of the original document in
which said note is to be inserted; and

a display indicating device configured to display a formed image on a screen of a
display device as a preview.

10 2. A printing image forming apparatus according to claim 1, wherein said note
includes at least one of text, images, and graphics.

3. A printing image forming apparatus according to claim 1, wherein:

said spacing device reduces the image of the original document to be printed and
moves said reduced image in up-and-down and right-and-left directions on the screen so as to
15 form the space for inserting said note.

4. A printing image forming apparatus according to claim 1, wherein:

the displayed formed image includes a combined image of the original document and
said inserted note, and said combined image is edited by a drag and drop operation on said
preview.

5. A recording medium recorded with a computer readable printer driver program performing the steps of:

producing on a computer an original document to be printed;

displaying the original document on a screen of a display device;

5 preparing a note to be inserted into the image of the original document;

reducing the image of the original document to be printed;

moving said reduced image in up-and-down and right-and-left directions on the screen

so as to form a space for inserting said note;

inserting said note into said formed space;

10 displaying a combined image on the screen of the display device as a preview; and

performing a drag and drop operation of said combined image on said preview.

6. A recording medium according to claim 5, wherein said note includes at least one of text, images, and graphics.

7. A print controlling apparatus, comprising:

15 a computer in which the printer driver program according to claim 5 is installed.

8. An image processing system, comprising:

a print controlling apparatus according to claim 7; and

a printer.

9. A printing image forming apparatus, comprising:

inserting means for inserting a note into an image of an original document produced on a computer and to be printed;

spacing means for forming a space in the image of the original document to be printed in which said note is to be inserted; and

display indicating means for displaying a formed image on a screen of a display
indicating means as a preview.

10. A printing image forming apparatus according to claim 9, wherein said note includes at least one of text, images, and graphics.

11. A printing image forming apparatus according to claim 9, wherein:

said spacing means for reducing the image of the original document to be printed and for moving said reduced image in up-and-down and right-and-left directions on the screen so as to form a space for inserting said note.

12. A printing image forming apparatus according to claim 9, wherein:

the displayed formed image includes a combined image of the original document and said note, and said combined image is edited by a drag and drop operation on said preview.

13. A method for forming a printing image, comprising the steps of:

producing on a computer an original document to be printed;

displaying an image of the original document on a screen of a display device;

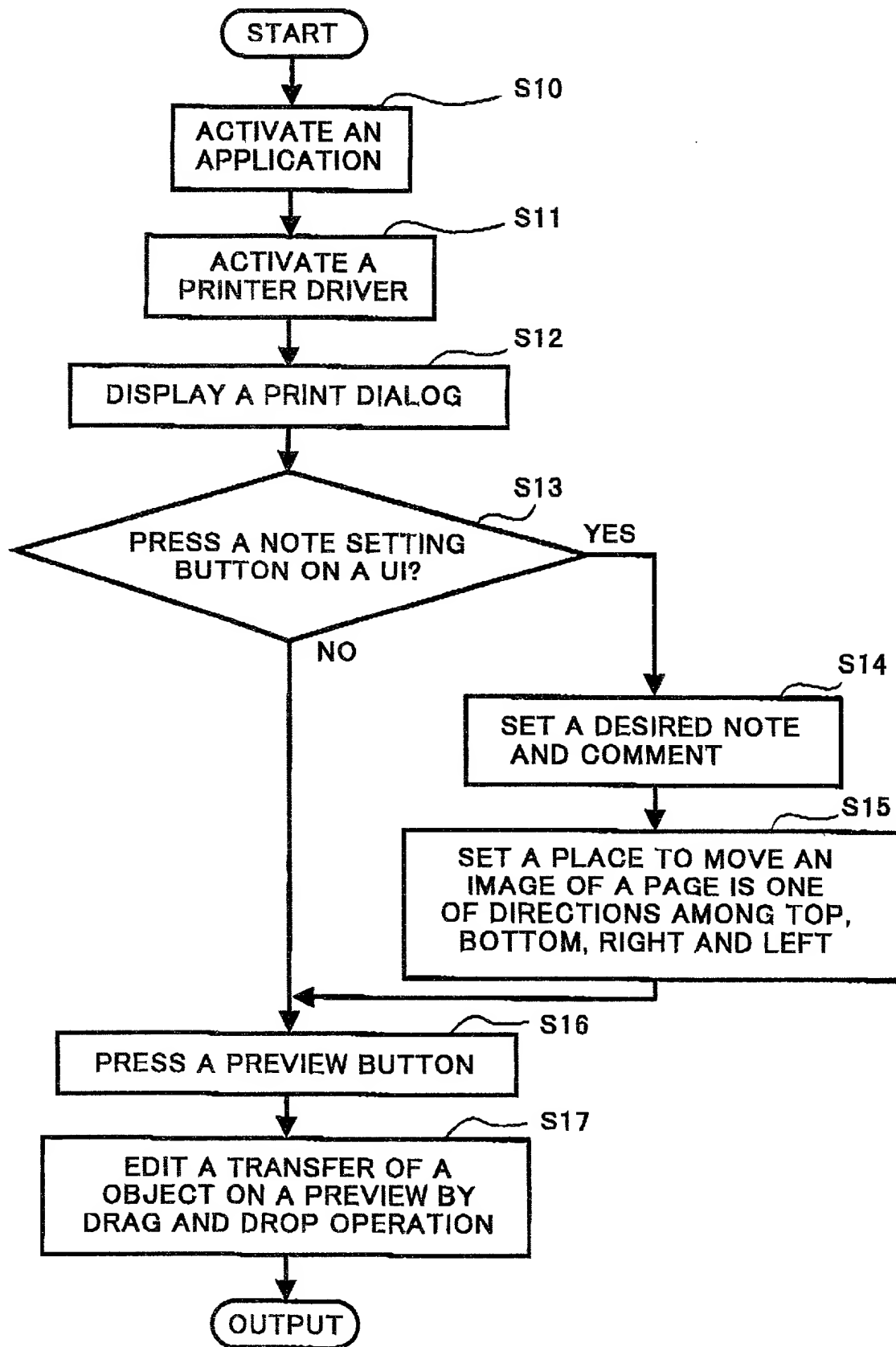
preparing a note to be inserted into the image of the original document;

ABSTRACT OF THE DISCLOSURE

A printing image forming apparatus in which a printer driver is installed. The printer driver forms a space in an image of an original document to be printed in which a note is inserted. An inserting device inserts text, images, graphics etc. as the note into the space
5 formed, and a display indicating device displays a formed image on a screen of a display device as a preview. An operator can freely select and set the note by an operation of a button on a UI (User Interface) so as to edit the image of the page.

0966964-09200
002260-4969660
I:\att\A\SNS\196466us-pa.doc

FIG. 2



Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

Japanese Language Declaration

日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者（下記の名称が複数の場合）であると信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled.

METHOD AND APPARATUS FOR EDITING AND
PROCESSING A DOCUMENT USING A PRINTER DRIVER

上記発明の明細書は、

- ☐ 本書に添付されています。
- ☐ 〃月〃日に提出され、米国出願番号または特許協定条約国際出願番号を〃〃とし、
(該当する場合) 〃〃に訂正されました。

the specification of which

- ☒ is attached hereto.
- ☐ was filed on 〃〃
as United States Application Number or
PCT International Application Number
〃〃 and was amended on
〃〃 (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第37編第1条56項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

Japanese Language Declaration (日本語宣言書)

私は、米国法典第35編119条 (a) - (d) 項又は365条 (b) 項に基づき下記の、米国外の国の少なくとも一カ国を指定している特許協力条約365 (a) 項に基づく国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

Prior Foreign Application(s)
外国での先行出願

<u>11-273185</u>	<u>JAPAN</u>
(Number) (番号)	(Country) (国名)
_____	_____
(Number) (番号)	(Country) (国名)

私は、第35編米国法典119条 (e) 項に基づいて下記の米国特許出願規定に記載された権利をここに主張いたします。

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

私は、下記の米国法典第35編120条に基づいて下記の米国特許出願に記載された権利、又は米国を指定している特許協力条約365条 (c) に基づく権利をここに主張します。また、本出願の各請求範囲の内容が米国法典第35編112条第1項又は特許協力条約で規定された方法で先行する米国特許出願に開示されていない限り、その先行米国出願書提出日以降で本出願書の日本国内または特許協力条約国際提出日までの期間中に入手された、連邦規則法典第37編1条56項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

私は、私自信の知識に基づいて本宣言書中で私が行なう表明が真実であり、かつ私の入手した情報と私の信じることに基づく表明が全て真実であると信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第18編第1001条に基づき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の声明を行なえば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣誓を致します。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or Section 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Priority Claimed
優先権主張

<u>September 27, 1999</u>
(Day/Month/Year Filed) (出願年月日)

(Day/Month/Year Filed) (出願年月日)

<input checked="" type="checkbox"/> Yes はい	<input type="checkbox"/> No いいえ
<input type="checkbox"/> Yes はい	<input type="checkbox"/> No いいえ

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

(Application No.) (出願番号)	(Filing Date) (出願日)
-----------------------------	------------------------

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

(Status: Patented, Pending, Abandoned) (現況: 特許許可済、係属中、放棄済)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Japanese Language Declaration
(日本語宣言書)

委任状：私は下記の発明者として、本出願に関する一切の手続きを米特許商標局に対して遂行する弁理士または代理人として、下記の者を指名いたします。
(弁理士、または代理人の指名及び登録番号を明記のこと)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith: (list name and registration number)

Norman F. Oblon, Reg. No. 24,618; Marvin J. Spivak, Reg. No. 24,913; C. Irvin McClelland, Reg. No. 21,124; Gregory J. Maier, Reg. No. 25,599; Arthur I. Neustadt, Reg. No. 24,854; Richard D. Kelly, Reg. No. 27,757; James D. Hamilton, Reg. No. 28,421; Eckhard H. Kueeters, Reg. No. 28,870; Robert T. Pous, Reg. No. 29,099; Charles L. Gholz, Reg. No. 26,395; William E. Beaumont, Reg. No. 30,996; Jean-Paul Lavalleye, Reg. No. 31,451; Stephen G. Baxter, Reg. No. 32,884; Richard L. Treanor, Reg. No. 36,379; Steven P. Wehrhouch, Reg. No. 32,829; John T. Goodkasian, Reg. No. 26,142; Richard L. Chinn, Reg. No. 34,305; Steven E. Lipman, Reg. No. 30,011; Carl E. Schiller, Reg. No. 34,426; James J. Kulbaski, Reg. No. 34,648; Richard A. Neifeld, Reg. No. 35,299; J. Derek Mason, Reg. No. 35,270; Surinder Sachar, Reg. No. 34,423; Jeffrey B. McIntyre, Reg. No. 36,867; William T. Enos, Reg. No. 33,128; Michael E. McCabe, Jr., Reg. No. 37,182; Bradley D. Lyle, Reg. No. 40,073; and Michael R. Casey, Reg. No. 40,294, with full powers of substitution and revocation.

書類送付先

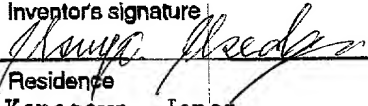
Send Correspondence to:

OBLON, SPIVAK, McCLELLAND, MAIER & NEUSTADT, P.C.
FOURTH FLOOR
1765 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202 U.S.A.

直接電話連絡先：(名前及び電話番号)

Direct Telephone Calls to: (name and telephone number)

(703) 413-3000

単独発明者または第一の共同発明者の氏名	Full name of sole or first joint inventor Ikuyo IKEDA	
発明者の署名	Inventor's signature 	Date Sep 20, 2000
住所	Residence Kanagawa, Japan	
国籍	Citizenship JAPAN	
郵便の宛先	Post Office Address c/o Ricoh Company, Ltd. 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo 143-8555, Japan	
第二の共同発明者の氏名	Full name of second joint inventor, if any	
第二の共同発明者の署名	Second joint inventor's signature	Date
住所	Residence	
国籍	Citizenship	
郵便の宛先	Post Office Address	

(第三以降の共同発明者についても同様に記載し、署名すること)

(Supply similar information and signature for third and subsequent joint inventors.)